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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/751,352	01/05/2004	Tukaram K. Hatwar	86982RLO	2226

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EXAMINER
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GARRETT, DAWN L

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 07/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/751,352

Applicant(s)

HATWAR ET AL.

Examiner

Dawn Garrett

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Response to Amendment***

1. This Office action is responsive to the amendment mailed May 24, 2006. Claim 1 was amended. Claims 1-16 are pending.
2. The rejection of claims 1-6 under 35 U.S.C. 112, second paragraph, is withdrawn due to the amendment.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Claim Rejections - 35 USC § 102 and 103***

4. Claims 1-5 are again rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hatwar (US 6,627,333).

The applied reference has a common inventor and assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

Hatwar discloses a device comprising a light emitting layer doped with a blue light emitting material and a layer in contact with this layer doped in the yellow region of the spectrum (see abstract). The dopants read upon the “at least two different dopants” of claim 1. Hatwar further teaches “the substrate 210 of an OLED can...optionally incorporate additional layers serving additional functions such as color-filter layers to remove unwanted spectral

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components from the electroluminescent light (see col. 5, lines 23-28). The filters disclosed by Hatwar read upon the “color filter array” of claim 1. The Hatwar devices emit white light (see abstract). Since rubrene is used as the dopant for the layer adjacent the light emitting layer emits yellowish-red light, the dopant is deemed to emit more red light and less green light per claim 2. Since Hatwar discloses a blue dopant, the “first layer” (light emitting layer) is considered to emit in the blue region and less in the green region per claim 2. The disclosed red, blue and green filters (see col. 13, lines 64-65) are deemed to be within the spectrum ranges specified in claims 3-5, because these ranges encompass the notoriously well-known wavelengths for these colors according to the visible spectrum of light (see spectrum of colors as evidence). Hatwar appears to disclose all components of the EL device as claimed. In the alternative that Hatwar is not considered sufficient to anticipate the claims, it would have been obvious to one of ordinary skill in the art at the time of the invention to have combined all the required components to form a device, because Hatwar discloses all of the required elements.

5. Claims 1-16 are again rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hatwar et al. (US 6,875,524).

The applied reference has a common assignee and inventors with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

Hatwar et al. disclose organic light-emitting diodes producing white light in which the hole transporting layer is doped with yellow and red-emitting dopants. The devices comprise a blue emitting light emitting layer (see abstract). Red, green and blue color filters are used (see abstract). The disclosed red, blue and green filters (see col. 13, lines 64-65) are deemed to be within the spectrum ranges specified in claims 3-5, because these ranges encompass the notoriously well-known wavelengths for these colors according to the visible spectrum of light (see spectrum of colors as evidence). Since both blue dopants and red dopants are disclosed, the limitations of claim 2 are considered to be met by Hatwar et al. With regard to claim 6, Hatwar et al. discloses the blue light-emitting layer includes a host material and a blue dopant (see ref. Claim 2). Host materials may include anthracene derivatives ADN and TBADN per claim 7 (see ref. Claim 4). Blue dopants may include perylene, perylene derivatives, distyrylbenzene derivatives, distyrylbiphenyl derivatives, and the boron derivatives of claims 10 and 11 (see ref. Claims 5, 7 and 10-12). The yellow dopant includes rubrene derivatives (see ref. Claim 17) with regard to claim 13. Red dopants include diindenoperylene compounds per claims 14 and 15 (see ref. Claims 19-20). The device further comprises an electron transporting layer with a green emitting dopant with regard to claim 16 (see ref. Claim 30).

Hatwar et al. appears to disclose all components of the EL device as claimed. In the alternative that Hatwar et al. is not considered sufficient to anticipate the claims, it would have been obvious to one of ordinary skill in the art at the time of the invention to have combined all the required components to form a device, because Hatwar et al. discloses all of the required elements.

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6. Claims 1-5 are again rejected under 35 U.S.C. 103(a) as being unpatentable over Koyama et al. (US 2001/0043168). Koyama et al. discloses white light emitting organic electroluminescent display devices comprising a laminate structure of an anode, hole injection layer, hole transporting layer, light emitting layer, electron transporting layer and cathode. Light emitting layers may be doped with fluorescent pigment (see par. 8). Koyama et al. further discloses multiple light emitting layers with each emitting a color such as red, green and blue (see par. 185 and 224). Koyama et al. discloses dopant may be added to the electroluminescent layers to change the color of light emitted from the layer as desired. Dopants include compounds such as DCM1, nile red, rubrene, coumarin, TPB and quinacridone (see par. 312). Koyama et al. further includes filters corresponding to each color of pixel for improving the color emitted from each (see par. 319 and 320). Although Koyama et al. does not *exemplify* a device with two dopants and filters, it would have been obvious to one of ordinary skill in the art to have formed a device comprising these features, because Koyama et al. discloses all components required by the claims.

***Terminal Disclaimer***

7. The terminal disclaimer filed on May 24, 2006 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent No. 6,627,333, U.S. Patent No. 6,875,524, U.S. Application No. 10/838,665, or U.S. Application No. 10/869,115 has been reviewed and is accepted. The terminal disclaimers have been recorded.

***Double Patenting***

8. A terminal disclaimer with regard to application 10/780,436 was not received with applicant's last response. Accordingly, the rejection of claims 1-16 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-35 of copending Application No. 10/780,436 is maintained. Although the conflicting claims are not identical, they are not patentably distinct from each other because '436 discloses white light devices comprising two dopants and multicolor filters. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

9. The rejection of claims 1-5 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 16, 17 and 20 of U.S. Patent No. 6,627,333 is withdrawn due to the terminal disclaimer.

10. The rejection of claims 1-16 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-45 of U.S. Patent No. 6,875,524 is withdrawn due to the terminal disclaimer.

11. The rejection of claims 1-8, 10, 11, and 14-16 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-4, 8, 10-13, 23-25, and 33-36 of copending Application No. 10/838,665 is withdrawn due to the terminal disclaimer.

12. The rejection of claims 1-8, 10, 11, and 14-16 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 2, 5, 7-11, 14, 16-18, 27-30 of copending Application No. 10/869,115 is withdrawn due to the terminal disclaimer.

***Response to Arguments***

13. Applicant's arguments filed May 24, 2006 have been fully considered but they are not persuasive.

All of the double patenting rejections set forth in the last Office action have been withdrawn due to the terminal disclaimers filed except the rejection over Application No. 10/780,436 because a terminal disclaimer over this application was not received.

As stated in the last Office action, both Hatwar (US 6,627,333) and (US 6,875,524) have a common assignee and inventors with the instant application. Based upon the earlier effective U.S. filing date of the reference, they constitute prior art under 35 U.S.C. 102(e). These rejections over the two Hatwar patents under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

With regard to the Hatwar '333 rejection, applicant argues Hatwar '33 provides improved results. Applicant states Figure 8 in Hatwar '333 "somewhat corresponds to the spectrum of Fig. 3 of the present application." In light of this statement that the Figure "somewhat corresponds" the proposed unexpected results are not clear and convincing. In addition, unexpected results can not overcome a 35 U.S.C. 102 rejection.

Applicant's second paragraph on page 12 of the remarks is not understood. Hatwar U.S. 6,875,524 was filed prior to the instant application. Applicant has not clearly established on the record that the invention is not "by another".



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With regard to the rejection over Koyama et al. (U.S. Pub. No. 2001/0043168), applicant argues there is no motivation or suggestion for element d) of claim 1. Part d) of claim 1 only requires one of the dopants be compatible with the filters and the resulting device emits white light. Koyama et al. discloses white light emitting organic electroluminescent display devices with light emitting layers doped with fluorescent pigment (see par. 8). Koyama et al. discloses dopant may be added to the electroluminescent layers to change the color of light emitted from the layer as desired. Koyama et al. further includes filters corresponding to each color of pixel for improving the color emitted from each (see par. 319 and 320). Since Koyama et al. comprises dopant to change the color of light as desired, comprises filters, and the final device emits white light, the dopant(s) are deemed to be “compatible” as required by part d) of claim 1.

### ***Conclusion***

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dawn Garrett whose telephone number is (571) 272-1523. The examiner can normally be reached Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached at (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Dawn Garrett  
Primary Examiner  
Art Unit 1774

July 26, 2006